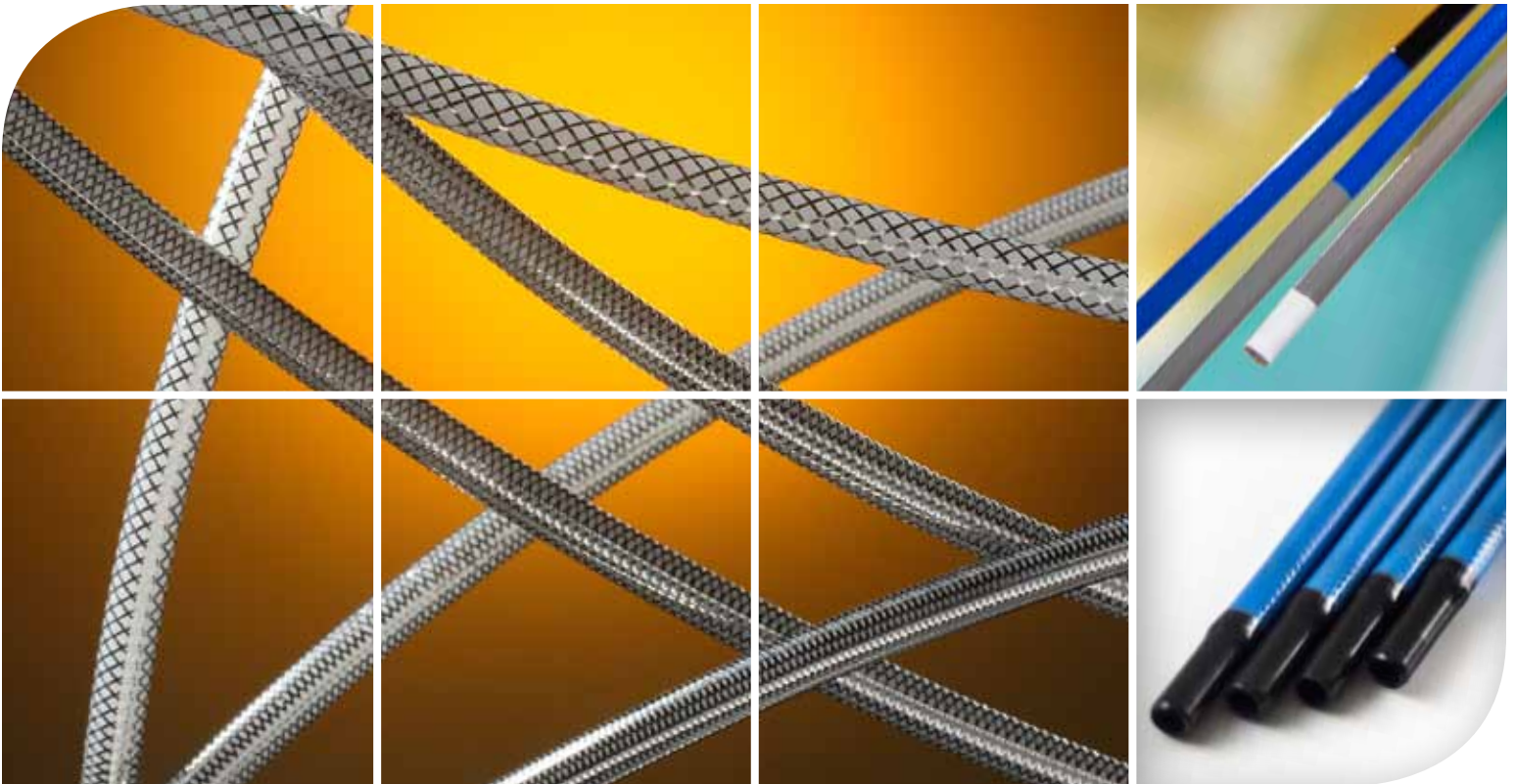


Braid-reinforced Shafts



Applications:

Interventional Vascular, Neurovascular, Electrophysiology, Endosurgery, Structural Heart, Diagnostic and other minimally invasive applications.

Vesta's team of experienced extrusion and catheter engineers will closely collaborate with your design team to develop a braided shaft that meets your application – specific requirements.

Function:

Braiding improves the functionality of a catheter shaft by improving kink and pressure resistance and increasing the mechanical properties of a tube all while maximizing the working area of a tube. Braided reflow shafts can be designed to provide a combination of different performance characteristics. Properties that can be tailored and varied over the length of the catheter shaft include:

- Flexibility
- Torque transmission
- Kink resistance
- Burst Strength
- Pushability
- Column Strength

Description:

Vesta uses dedicated extrusion, braiding and reflow equipment to manufacture its braided shafts. Shafts can have a single or multiple durometer along the shaft or the braid pattern can be varied to change the stiffness of the shaft along the length. Customers typically employ braided construction where the application requires high pressure resistance or requires navigation thru small and tortuous anatomies, such as small blood vessels in the heart or brain. Vesta's braiding capabilities include:

- OD ranges from 0.030" – 0.320"
- Round wire, flat wire and fibers
- Constant or Variable Pick Pattern
- Single or Variable Durometer
- PTFE Lined
- Braid to Coil Transition
- Cut to Length or Spooled

Call 951.547.7400 or visit www.vestainc.com for more information.

Post Extrusion Secondary Operations



Tip Forming

- Custom tipping on wide range of tubing sizes. Tips can be open or closed at the end with or without radius
- Tubing OD Size Range: 4 Fr (0.050") to 30 Fr. (0.390")
- Tip Length up to 2.0"
- Materials: Most thermoplastic, including high temp materials such as PEEK



Tube Flaring

- Custom tube end flaring with various different flare angles
- Tubing OD Size Range: 4 Fr (0.050") to 30 Fr. (0.390")
- Materials: Most thermoplastic, including high temp materials such as PEEK



Pad Printing

- Pad printing capabilities to print distance markers, orientation markers, band or other information on thermoplastic tubing
- Printing on single side or 360 degrees
- Corona Treating available to improve ink adhesion for certain materials



Hole Punching/Drilling

- CNC controlled hole punching and drilling
- Holes sizes as small as 0.006" in diameter
- Various hole patterns including around the circumference, spiral and on single axis
- Off axis, skiving and unique geometries are also available
- Tubing OD as large as 30 Fr. (0.390")

Precision Cutting

- Tubing OD range 0.010" – 0.250"
- Tubing Cut length: 0.040" – 6.00" (Longer lengths available on case by case basis)
- Tolerance as tight as +/- 0.005"
- Materials: Thermoplastics (durometer and wall thickness dependent)



Other Services Include

- Precision Thermoplastic Extrusion
- Polyolefin Heat Shrink Tubing
- Marker Band Swaging
- Annealing
- Bonding

About Lubrizol LifeSciences

Lubrizol LifeSciences has significantly expanded its capabilities through new products, state-of-the-art facilities, acquisitions and alliances. The combination of Lubrizol's polymer expertise, Vesta's quality medical manufacturing and Particle Sciences' leadership in drug formulation development, allows LifeSciences to provide end-to-end solutions for success in the drug delivery market. With this unique blend, Lubrizol delivers comprehensive medical and pharmaceutical solutions.

To find out more about Vesta's complete solutions visit us at www.vestainc.com or e-mail sales@vestainc.com.

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